

# inovair<sup>®</sup>

## Geared Centrifugal Blowers

### THE MOST RELIABLE, COST EFFECTIVE AND EFFICIENT BLOWERS

Inovair's highly efficient and durable geared centrifugal blowers deliver the industry's lowest total ownership cost. The key is a high-efficiency design that is also affordable, thanks to the use of industry standard components to avoid unnecessary complexity and cost, as well as the company's 25+ years of experience designing and manufacturing compact blowers. Inovair's proven design approach also simplifies maintenance and produces extreme durability.

With documented energy savings as high as 45% relative to PD and multistage blowers, and without the electrical complexity and durability issues seen in high speed turbo blowers, Inovair offers a unique combination of high efficiency, reliability, and simplicity. Unlike some others, Inovair blowers and customers are supported by the advantages of a vertically integrated manufacturer, with Inovair controlling all elements of design, production, and service. All of these activities are performed 100% in the USA, at the company's headquarters in Kansas City.



#### IO SERIES

30-100 HP



#### IM-20

25-125 HP



#### IM-30

Single or Stacked  
40-250 HP

## IM SERIES MACHINE LINEUP



IM-10



IM-20



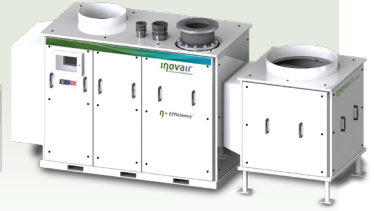
IM-30  
IM-40



IM-30  
IM-40



IM-50



IM-60

## IO SERIES MACHINE LINEUP



IO-10

IO-20

## INDUSTRY STANDARD COMPONENTS

- NEMA Standard Motor
- Allen Bradley PLC
- Off The Shelf Variable Frequency Drive

## DURABLE DESIGN

- Indoor/Outdoor Installation
- Dirt/Dust Tolerant
- Start-Stop Capable

## OPERATING CAPACITY

- 150 to 2,600 SCFM
- Up to 22 psi
- Capable of variable level applications

## BEST-IN-CLASS EFFICIENCY

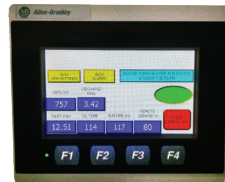
- Precision machined aerodynamic impeller stages
- 10-45% Energy Savings Over Multi-Stage or PD Blowers (~80% Isentropic Efficiency)

## LOW MAINTENANCE COST

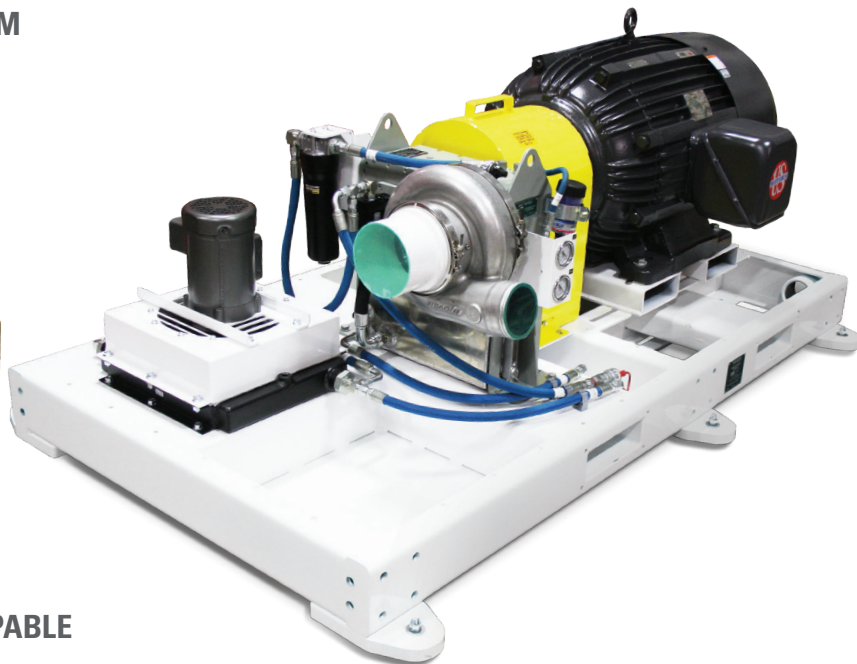
- Annual Maintenance Interval
- High Capacity Inlet Filters
- Serviceable by Plant Personnel

## INTEGRATED CONTROL SYSTEM

- MASS AIRFLOW (SCFM) BASED CONTROL SYSTEM
- AUTOMATIC TEMPERATURE COMPENSATION
- AUTOMATIC PRESSURE COMPENSATION FOR VARYING LIQUID LEVELS
- DO FEEDBACK BASED FLOW CONTROL CAPABLE



- ALLEN-BRADLEY PLC'S
- IN-HOUSE UL CERTIFIED 508A PANEL SHOP
- ETHERNET (TCP/IP MODBUS) OR HARD WIRE CAPABLE
- EASY SYSTEMS INTEGRATION



# INOVAIR CASE STUDIES

See [Inovair.com](http://Inovair.com) for additional information.



## 37% ENERGY SAVINGS, IMPROVED RELIABILITY, OUTDOOR DURABILITY

**Application:** Aeration Basin  
**Flow:** 3,600 scfm    **Pressure:** 9.5 psig    **Horsepower:** 200 HP  
**Description:** Western Missouri wastewater plant documented 37% energy savings along with improvements in reliability (reductions in maintenance and unplanned downtime) by replacing its two 150 HP PD blowers (300 HP total) with Inovair's 200HP stacked IM series blowers.



## VARYING LIQUID LEVELS

**Application:** Digester Aeration  
**Flow:** 900 scfm    **Pressure:** 10.5 psig    **Horsepower:** 60 HP  
**Description:** Southern California wastewater plant sought out Inovair to provide a solution for their varying liquid level digester. Inovair's compact footprint and ability to operate over widely varying liquid levels were key reasons for choosing Inovair.



## HIGH EFFICIENCY SBR SYSTEM, RELIABLE START/STOP OPERATION

**Application:** Lagoon Aeration  
**Flow:** 1,317 scfm    **Pressure:** 7.4 psig    **Horsepower:** 75 HP  
**Description:** A new lagoon process technology involves intermittent decants, requiring the blowers to start and stop multiple times per day. Inovair blowers were selected for this ability, coupled with a need to cut the high electrical costs previously experienced with the original positive displacement blowers.



## BETTER FLOW CONTROL AND EFFICIENCY WITH 25% LESS ENERGY

**Application:** Aeration Basin  
**Flow:** 1,230 scfm    **Pressure:** 8.5 psig    **Horsepower:** 75 HP  
**Description:** An Ohio plant was looking to replace their (3) 100 HP multi-stage blowers with more efficient blowers, with better flow control. Inovair provided (3) 75 HP IM series blowers with a master control panel. The higher efficiency blowers, along with the improved flow control provided a 25%+ energy savings.



## 33% ENERGY SAVINGS, LOWER DBA, OUTDOOR DURABILITY

**Application:** Oxidation Ditch Aeration  
**Flow:** 1,000 scfm    **Pressure:** 6 psig    **Horsepower:** 50 HP  
**Description:** Southwest Missouri wastewater facility selected three 50 HP Inovair blowers over three 75 HP PD blowers. The 33% savings in installed horsepower accompanies a significant decrease in operating noise. Integrally geared durable design is resistant to harsh weather and air contaminants.



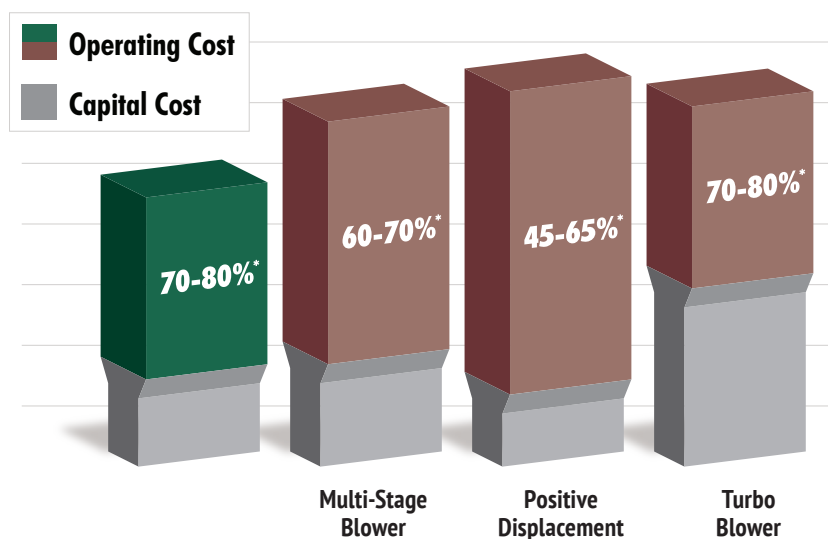
## OPERATES ON SAME HEADER WITH MULTI-STAGE CENTRIFUGALS

**Application:** Aeration Basin  
**Flow:** 890 scfm    **Pressure:** 9.5 psig    **Horsepower:** 50 HP  
1,320 scfm    8.9 psig    75 HP  
**Description:** Western Missouri wastewater plant documented 37% energy savings along with improvements in reliability (reductions in maintenance and unplanned downtime) by replacing its two 150 HP PD blowers (300 HP total) with Inovair's 200HP stacked IM series blowers.



High efficiency, compact size, reduced noise and integrated control systems are areas of significant innovation for aeration blowers in recent years. Inovair has made these improvements not only affordable, but also more reliable. Small to medium sized wastewater plants can now install or upgrade their blowers without the high cost or component complexity of air bearing or mag bearing turbo blowers.

### LOWEST COST OF OWNERSHIP



\* Nominal Blower Isentropic Efficiencies

### ADVANTAGES OF "MADE IN THE USA"

- INCENTIVES/FUNDING
- BEST-IN-CLASS PARTS AND SERVICE TURNAROUND
- INDUSTRY LEADING AVAILABILITY
- HIGHEST QUALITY
- US-BASED SUPPORT

